WHAT IS CLAIMED IS:

1. A method for dynamically allocating Internet Protocol addresses for a wireless cell, comprising:

determining a total Internet Protocol address pool for the wireless cell;

partitioning the Internet Protocol address pool into groups of address spaces for use with an associated user group within the wireless cell;

monitoring IP address demands associated with the wireless cell; and

updating the groups of address spaces using an IP server.

2. The method of claim 1, wherein said step of determining a total Internet Protocol address pool, comprises the step of:

performing a predictive analysis to allocate Internet Protocol address space for the associated user group within the wireless cell.

3. The method of claim 2, wherein said predictive analysis is performed using a moving weighted mean average.

4. The method of claim 3, wherein said moving weighted average comprises the steps of:

recording an average number of requests from hosts in each user group; and

computing an average number of total IP addresses over a suitable fixed period of time.

5. The method of claim 4, wherein said suitable fixed period of time is approximately 10 minutes.

6. The method of claim 2, wherein the user group is one of a wireless handoff terminal, a resident terminal and a wired terminal.

7. The method of claim 1, wherein said step of determining a total IP address pool includes the steps of utilizing at least one of:

real-time data, including present network IP address demands associated with the wireless cell;

non-real-time, data including previous IP address demands associated with the wireless cell;

call blocking parameters;

quality of service and performance parameters; and

third party data including third party ISP address allocation specifications, quality of service parameters or performance parameters.

8. The method of claim 1, further comprising the step of:

assigning a priority level to a mobile host requesting an IP address associated with each wireless cell;

wherein the priority level is set at a first level in the case of a handoff mobile host and at a second level in the case of a resident mobile host, and the first priority level is greater than the second priority level.

9. The method of claim 1, further comprising the step of:

classifying user groups within the cell into handoff hosts and dormant hosts.

10. The method of claim 2, further comprising the step of:

establishing guard bands for device categories to ensure a minimum number of Internet protocol addresses are available for the device categories based on the predictive analysis.

11. A method for dynamically allocating Internet Protocol addresses for a wireless cell, comprising:

performing a predictive analysis to allocate Internet Protocol address space for an associated user group within the cell;

partitioning the Internet Protocol address space into groups of address spaces for use with an associated user group based on the predictive analysis;

updating the Internet Protocol address space via an IP address server; and

establishing guard bands for device categories to ensure a minimum number of Internet protocol addresses are available for the device categories.

12. The method of claim 12, wherein the device categories comprise at least one of wireless devices during handoff, resident wireless devices and wired devices.

13. The method of claim 12, further comprising the step of:

adjusting the guard bands based on the predictive analysis.

14. The method of claim 12, wherein said predictive analysis is performed using a moving weighted mean average.

15. The method of claim 14, wherein said moving weighted average comprises the steps of:

recording an average number of requests from hosts in each user group; and

computing an average number of total IP addresses over a suitable fixed period of time.

16. The method of claim 15, wherein said suitable fixed period of time is approximately 10 minutes.

17. An apparatus for dynamically allocating Internet Protocol addresses for a wireless cell, comprising:

an IP address server which determines a total Internet Protocol address pool for a wireless cell and a partitioned address pool of groups of address spaces for use with an associated user group within the cell; and

wherein the server monitors IP address requests associated with the wireless cell, and updates the groups off address spaces based on the IP address requests.

18. The system of claim 17, further comprising:

a wireless IP address agent, said agent residing in a wireless network;

wherein the wireless IP address agent handles requests for IP addresses from wireless terminals, categorizes the wireless terminal as a handoff or a resident host, and forwards the IP address associated requests with the handoff hosts or the resident hosts to the IP address server.

19. A system for dynamically allocating Internet Protocol addresses for a plurality of wireless cells, comprising:

an IP address server which determines a total Internet Protocol address pool for each of a plurality of wireless cells and for each of a plurality of partitioned address pools of groups of address spaces for use with an associated user group within the cell;

wherein the plurality of servers monitor IP address requests associated with each of the plurality of wireless cells, and update the groups of address spaces based on the IP address requests.

20. The system of claim 19, further comprising:

a plurality of wireless IP address agents; said agents residing in a wireless network;

wherein each of the wireless IP address agents handle requests for IP addresses from a plurality of wireless terminals, categorizes each wireless terminal as a handoff or a resident host, and forwards the IP address requests associated with the handoff hosts or the resident hosts to the IP address server.

21. A system for dynamically allocating Internet Protocol addresses for wireless cells, comprising:

an IP address server which determines a total Internet Protocol address pool for the wireless cell for use with an associated user group within the cell, and performs a predictive analysis to determine a required Internet Protocol address pool for the wireless cell;

wherein the server monitors the IP address requests associated with the wireless cell, and updates the groups off address spaces based on the IP address requests.

22. The system of claim 21, further comprising:

a plurality of base stations; said base stations residing in a wireless network;

wherein each of the plurality of base stations performs a predictive analysis to establish guard bands for a handoff host and a classification analysis to determine whether a wireless terminal is in a handoff state or is a resident host.

23. A system for dynamically allocating Internet Protocol addresses for a wireless cell, comprising:

a plurality of base stations; each of said base stations comprising:

an IP address pool; and

an IP address server;

wherein the IP server determines a total Internet Protocol address pool for the wireless cell for use with an associated user group within the cell, and performs a predictive analysis to determine a required Internet Protocol address pool for the wireless cell.